'The challenges never seem to happen during banker's hours'

By Kendra Ceule

Crucial Gemini team works nights and weekends to support the ISS and its crew

WANTED: *Flight Controllers. Must be willing to do the work of three highly trained people and work primarily nights and weekends. Benefits include: Challenge of shaping a new era of flight control, appreciation and respect from other flight controllers and a great job title – ATLAS or TITAN.*

Not many people would respond to such an opportunity. But there are a few who did – an elite group of International Space Station (ISS) flight controllers called the Gemini team. The members of this team train for months, work at night and play a crucial role in the maintenance of the ISS and the safety of its crew.

"We are really changing the operations control paradigm with the Gemini program," said John McCullough, a flight director.

This nocturnal team is a relatively new addition to JSC. Gemini was created to solve a problem in the Mission Control Center: ISS flight controller burnout. Operators were frustrated with the night and weekend shifts they were sometimes obligated to work in order to maintain the 24-hour station, which led to lower overall morale. Some controllers even left their MCC jobs because of it.

"You wear and tear operators pretty quickly in the ISS flight control room," said Judd Frieling, a Gemini flight controller. "Unlike the shuttle, you never land, and it can get pretty stressful."

The reduction in manning concept is not new. During early construction of the ISS, before anyone was living and working there, the modules were monitored overnight by a Station Duty Officer (SDO). The SDO would call in the appropriate personnel if any serious technical problems arose during the night.

But after the Expedition One crew arrived at the ISS in November 2000, a fully manned control team became necessary 24 hours a day. Soon, the flight controllers' time and energy were stretched thin. The erratic hours started to take their toll, and a solution had to be found.

In the spring of 2001, the Mission Operations Directorate began looking for an answer to the burnout problem. They came up with Gemini: A reduced flight control team for the night and weekend shifts. Gemini would reduce a normal six-person team down to two people – hence the zodiac "twin" reference with the name Gemini.

Each Gemini operator would be responsible for three disciplines, whereas a regular operator focuses on one.

"The goal was to reduce the number of people working in the MCC during 'bad hours' without reducing the capability of the flight control team," said Steve Koerner, Gemini group lead. Koerner, a former shuttle flight controller, was part of the team that came up with the Gemini concept.

Then came the hard part: Recruitment. A Gemini operator would essentially be responsible for more than a regular controller, and do it during the shifts that most people didn't want. On the upside, the off-console office hours would be flexible, and a Gemini controller would "certainly be much more marketable for future MOD leadership positions," said Jon Harpold, director of MOD.

A full Gemini team would consist of six ATLAS (Atmosphere Thermal Lighting Articulation Specialists) controllers, and six TITAN (Telemetry, Information Transfer and Attitude Navigation) operators.

Koerner stepped up to the task of finding 12 people willing to do the job. Recruitment was targeted to existing flight controllers, so that they would only have to learn two additional disciplines. They believe a rookie operator would take longer to train.

Koerner offered operators the chance to build a new class of flight control from the ground up. Eleven people took him up on the opportunity, and became the first Gemini team. Today's ATLAS controllers are Stein Cantrell-Avloes, Max Haddock, Carla Haroz, Joe Peacock, Natalie Turner and Christine Tyrell. The TITANs are Trey Brouwer, Karen Bush, Judd Frieling, Dan Jackson and Mark Severance. Gemini still needs one more TITAN controller to make a full 12-person team.

The Gemini operators trained for several months to learn their new disciplines inside and out. Each controller must be able to handle any problem in his or her three systems for up to two hours – the time it might take for an on-call specialist from the individual systems flight control groups to arrive at MCC. In October of last year, Gemini controllers tested the waters, supporting ISS operations every other weekend. In January 2002, the team jumped in and took over most night and weekend shifts.

Recruitment may have been difficult, but the 11 current Gemini controllers say there's no place they would rather be.

"People have responded not to the lousy hours, but to the challenge and the responsibility of learning more and doing more," said Bob Castle, Deputy Chief of the ISS Flight Director Office.

For instance, Karen Bush, TITAN, said she enjoys learning more about the station, which makes her a better flight controller. She also said working the late-night shift, which starts at 11 p.m., "guaranteed me the opportunity to be with my family in the evening" and lets her run errands during the day.

Judd Frieling, also a TITAN, said he joined because he was "looking for a challenge, and liked the idea of molding a new group."

Frieling added that the ISS seems to experience the most technical problems at inconvenient times. "The challenges never seem to happen during banker's hours," he said.

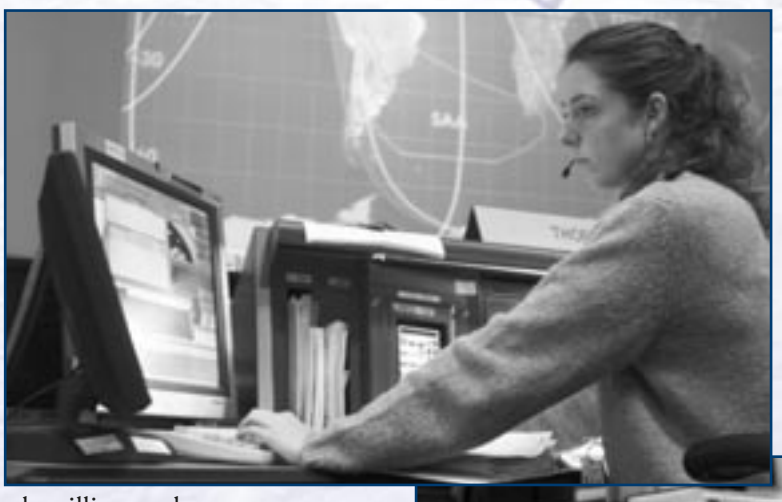
The Gemini team has certainly had its share of challenges and tests. One notable example is the Feb. 4 Loss of Attitude Control (LOAC) event. "A LOAC event affects power, which affects everything else," said Castle. "It was a significant challenge."

Frieling, who was the TITAN on console for the February LOAC, said there are advantages to the Gemini system during a technical challenge. "It's often easier to coordinate a problem between two people instead of six," he said. "Where three people might see three separate problems on their consoles, a Gemini controller can spot the overall pattern."

Gemini has been, and will continue to be, a team effort. "In the spirit of doing more with less," said McCullough, "we all roll up our sleeves and do what is necessary to be safe and successful as a very close-knit team."

Overall, ISS Program Manager Tommy Holloway is pleased with the Gemini team, saying it has "significantly improved ISS continuous operations."

He added, "The people in the group are some of the best and brightest in MOD and their efforts are essential to our future success." ❖



NASA JSC 2001e16659 Photo by James Blair

NASA JSC 2001e16657 Photo by James Blair

On nights and weekends the Gemini team members work in the B-Flight Control Room at MCC. Pictured here are two of those team members: Natalie Anne Turner (top) at the ATLAS console and Karen Bush (bottom) at the TITAN console.

When tragedy strikes...

By Melissa Davis

JSC team formed to handle critical incidents

It can come in the form of a deadly tornado, or blow in as a major hurricane. It can be as bold as a terrorist attack, or as sudden as a coworker's fatal heart attack.

No matter how a crisis presents itself at Johnson Space Center, the Employee Assistance Program (EAP) is prepared to help with the emotional aftermath.

EAP Director Jackie Reese has developed a team trained to assist with a JSC-related crisis. The newly formed Critical Incident Stress Management (CISM) team is comprised of employees serving as facilitators.

"I asked for volunteers from areas in which people use people skills as part of their day-to-day work," Reese said.

JSC has a definite need for such a team. "We are a population of over 10,000 folks. When something impacts one member of our 'family' it impacts others as well," said Reese, who works for Kelsey Seybold under the Occupational Health contract.

JCS's vulnerability to traumatizing events is not limited to space-related incidents, she said. Other crisis situations can include:

- Traumatic deaths (accidents, murders, suicides)
- Sudden serious illnesses (heart attacks, cancer)
- Work place violence (violent employees, stalkers)
- Natural disasters (hurricanes, floods)
- Terrorist attacks

The spectrum is broad when it comes to what constitutes a critical incident, said Roger Solomon, Ph.D., a certified CISM trainer working with the JSC team.

A critical incident is "any situation resulting in an overwhelming sense of vulnerability and/or lack of control," said Solomon, an international expert who trains and lectures around the world. He consults for private industry and other federal agencies, including the FBI.

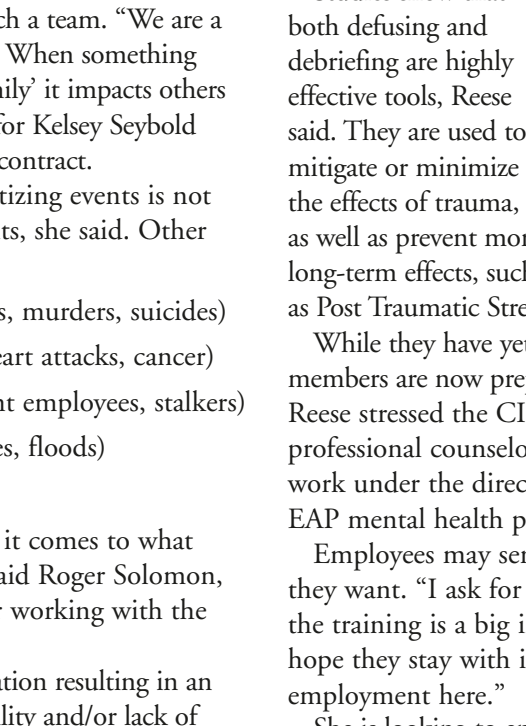
When called upon, the CISM team will offer defusings immediately for emergency personnel and victims.

"Defusings are 30-minute, low-key interventions that provide initial stabilization shortly after an incident – preferably before folks go home," Reese said. "We lessen the stress of the incident by normalizing the reactions folks have."

The team also works to help them become 'grounded' again and regain a sense of safety by helping them identify positive or functional coping plans. By doing this the team identifies people who need additional support or services.

In addition, defusings and debriefings will be available for everyone impacted in the days and weeks that follow.

Debriefings are more involved interventions lasting for a few hours. They typically take place a few days after an incident, when people start feeling the effects.



NASA JSC 2002e16815 Photo by Bill Stafford

EAP Director Jackie Reese works with employee volunteer Amy Mendez (seated) during CISM training.

The affected discuss their reactions, learn about typical reactions to trauma, identify their own coping resources and are offered other tools for adaptive coping.

"We help folks develop a self-care plan and offer resources for additional help," Reese said. "We will follow up for at least a year post-incident to see how they are doing."

Studies show that both defusing and debriefing are highly effective tools, Reese said. They are used to mitigate or minimize the effects of trauma, as well as prevent more long-term effects, such as Post Traumatic Stress Disorder.

NASA JSC 2002e16810 Photo by Bill Stafford

Pictured is JSC's first Critical Incident Management Team. Front row, from left, is Sandra Parker, Center Operations-NASA; Erin Bly, Lisa Tice, Gail Howell and Jackie Reese, all Occupational Health-Kelsey Seybold; and Linda LaPradd, Sue Leibert, Stacey Medina, Beth Hall and Amy Mendez, all Human Resources-NASA. Back row, from left, is Teresa Luker, Occupational Health-Kelsey Seybold; and Natalie Saiz, Kim Wilson, Karl Schuler, and Brad Mudgett, all Human Resources-NASA. Not pictured: Sandra Amundson, Occupational Health-Kelsey Seybold; and Eric Thomas, Human Resources-NASA.

While they have yet to respond to a crisis, team members are now prepared to act when needed. Reese stressed the CISM team is not comprised of professional counselors. "They are facilitators that work under the direction and supervision of the EAP mental health professionals," she said.

Employees may serve on the team as long as they want. "I ask for a two-year commitment, as the training is a big investment," Reese said. "I hope they stay with it for the duration of their employment here."

She is looking to enlist the help of more employees. "I am interested in building this team and will be asking for more volunteers to train next year," she said. "Anyone with good people skills, good coping skills and a willingness to help would be welcomed."

Reese believes this team is a vital component in the EAP's service to the JSC community. "I have wanted to do this since I started here because we have such a large population and have had many traumatic losses," she said.

Creating the JSC CISM program has been satisfying for Reese, especially when she sees the team's focus and desire to help those in need.

"They work well together and have been eager to learn about critical incident management and debriefing," Reese said. "They are a wonderful group of folks who understand the importance of providing support and education for fellow employees during times of crisis."

HR's Amy Mendez takes her role as a CISM team member seriously.

"As we've seen this past year, the shock of a tragedy is a hard thing to work through. Having a team like this at JSC enhances the EAP's resources available to JSC people and adds another human element to the emergency response team," she said.

"I see this team helping with a whole range of issues: From helping a small group or branch work through a co-worker's death to being part of the response team for a bigger tragedy or crisis."

Mendez is no stranger to crisis counseling. She ran a crisis center for a year while in college, and she was a crisis counselor for two years. In addition, she has a psychology undergraduate degree, and a master's degree in behavioral science and human resources.

"I volunteered because I wanted to help JSC people in any way I could, should a tragedy or disaster occur," she said. "It also connected to a lot of my background...I guess it's in my blood."

Sandra Parker also felt the call to support her coworkers. "As with most Americans, I was deeply affected by the September 11 attacks and was having a very difficult time dealing with the tragedy," she said. "Like so many others, I felt so helpless."

Parker now feels like she can make a difference for others through the CISM team. "It has provided me with the tools that if, God forbid, something like this happens again, at least I will be prepared to help." ❖

CUT AND SAVE

What to do in case of a critical incident:

- If the critical incident requires emergency personnel, call x33333. The Employee Assistance Program's Critical Incident Stress Management team will be notified as part of the Emergency Response Team.
- If the critical incident is not an emergency, you can call the EAP office directly at x36130.
- Center management, supervisors and human resources representatives can also assist in obtaining crisis services.

2002 FOD Chili Cookoff

And the winners are...

Best Chili

First place:

❖ **Dr. Bob's Cosmic Cowboy Cookers** (Pictured top left)
National Space Biomedical Research Institute

Tie for second place:

❖ **Mad Cow**
SR&QA

❖ **Red Baron**
Combined team of current/retired NASA, contractor and Air Force employees

Fourth place:

❖ **Frisky Peppers**
Oceaneering Space Systems

Tie for fifth place:

❖ **Crime Scene**
ISD

❖ **Wing Nuts**
FCOD

Long Distance Award

(Team who traveled the farthest to compete)

❖ **Staged Combustion**
Boeing-Rocketdyne, Canoga Park, Calif.

People's Choice Chili:

❖ **Wrong Stuff**
Combined Mission/Flight Operations Team
(dedicated in memory of Bill Preston by Wing Nuts)

Showmanship

First place:

❖ **Surfin' Chili** (Pictured bottom left)
Combined team of NASA and Contractor Surfin' People

Second place:

❖ **Buzzards' Breath**
United Space Alliance (Crew Support Office)

Third place:

❖ **Crime Scene**
ISD

Fourth place:

❖ **Wrong Stuff**
Combined Mission/Flight Operations Team

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